

Christopher Holloway  
Hydra-Tech, Inc.  
3020 Commercial Road  
Ft. Wayne, IN 46809

Re: Registered Construction and Operation Status,  
**CP 003-14276-00176**

Dear Mr. Holloway:

The application from Hydra-Tech, Inc., received on April 16, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following aerial device manufacturing operation, to be located at 3020 Commercial Road in Ft. Wayne, Indiana, 46809, is classified as registered:

- (a) one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 1, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S2;
- (b) one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 2, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S3;
- (c) one (1) steel shot blast booth, identified as Shot Booth 1, with a maximum shot usage of 25 pounds per hour, with PM/PM10 emissions controlled by a cyclone, with emissions exhausted through Stack S1;
- (d) one electric plasma cutter torch;
- (e) one (1) cold saw;
- (f) one (1) drill press;
- (g) twenty (20) metal inert gas welding stations with a maximum combined carbon steel wire usage rate of 10.8 pounds per hour per hour;
- (h) twenty (20) oxyacetylene cutting stations;
- (i) one (1) ancillary testing area for mounts and skids; and
- (j) twenty-eight (28) natural gas fired space heaters and two (2) natural gas fired drying ovens, with a combined capacity of 7.50 MMBtu/hr.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
2. Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes of the aerial device manufacturing operation shall be limited as follows:

- (a) Shot Blast Booth: 7.60 lb PM/hr
- (b) Plasma Cutting Process: 0.55 lb PM/hr
- (c) Drill Press / Cold Saw Process: 0.55 lb PM/hr
- (d) Welding Process 0.55 lb PM/hr
- (e) Oxyacetylene Cutting Process: 0.55 lb PM/hr

The particulate matter (PM) from coating booths 1 and 2, each, shall be determined utilizing the following equation.

$$E = 4.10 * P^{0.67}$$

where: P = Process Weight Rate, tons/hr  
E = Emission Rate, lb PM/hr

3. Pursuant to 326 IAC 8-2-9, the VOC content of each coating applied in Coating Booths 1 and 2, shall be less than or equal to 3.5 pounds per gallon of coating, excluding water.

All solvents sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

4. To document compliance with Condition 3, the Permittee shall maintain records of the coating(s) applied to metal in accordance with (a) through (c) below. Records maintained for (a) through (c) shall be complete and sufficient to establish compliance with the VOC content limit of Condition 3.

(a) A log of the dates of use;

(b) The name and brand of the coating(s) applied; and

(c) The VOC content of the coating(s), excluding water, as applied.

The records shall also include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the VOC content of the coating(s).

All records shall be maintained for a minimum period of five (5) years, and made available upon request of the Office of Air Quality.

This registration shall supersede all previous air approvals issued to this source.

Any change or modification which may increase the VOC unrestricted potential to emit to 25 tons per

year or more from the equipment covered in this registration must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

SDF

cc: File - Allen County  
Allen County Health Department  
Air Compliance - Jennifer Dorn  
Permit Tracking - Janet Mobley  
Air Programs Section- Nancy Landau

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Registration**

#### **Source Background and Description**

**Source Name:** Hydra-Tech, Inc.  
**Source Location:** 3020 Commercial Road, Ft. Wayne, IN 46809  
**County:** Allen  
**SIC Code:** 3999  
**Operation Permit No.:** 003-14276-00176  
**Permit Reviewer:** SDF

The Office of Air Quality (OAQ) has reviewed a registration application from Hydra-Tech, Inc. relating to the operation of aerial device manufacturing operation including:

- (a) one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 1, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S2;
- (b) one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 2, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S3;
- (c) one (1) steel shot blast booth, identified as Shot Booth 1, with a maximum shot usage of 25 pounds per hour, with PM/PM10 emissions controlled by a cyclone, with emissions exhausted through Stack S1;
- (d) one electric plasma cutter torch;
- (e) one (1) cold saw;
- (f) one (1) drill press;
- (g) twenty (20) metal inert gas welding stations with a maximum combined carbon steel wire usage rate of 10.8 pounds per hour per hour;
- (h) twenty (20) oxyacetylene cutting stations;
- (i) one (1) ancillary testing area for mounts and skids; and
- (j) twenty-eight (28) natural gas fired space heaters and two (2) natural gas fired drying ovens, with a combined capacity of 7.50 MMBtu/hr.

#### **Permitted Emission Units and Pollution Control Equipment**

The following is a list of the permitted units.

- (a) one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 1, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S2;
- (b) one (1) steel shot blast booth, identified as Shot Booth 1, with a maximum shot usage of 25 pounds per hour, with PM/PM10 emissions controlled by a cyclone, with emissions exhausted through Stack S1;
- (c) one electric plasma cutter torch;
- (d) one (1) cold saw;
- (e) one (1) drill press;
- (f) twenty (20) metal inert gas welding stations with a maximum combined carbon steel wire usage rate of 10.8 pounds per hour per hour;
- (g) twenty (20) oxyacetylene cutting stations;

- (h) one (1) ancillary testing area for mounts and skids; and
- (i) twenty-eight (28) natural gas fired space heaters and two (2) natural gas fired drying ovens, with a combined capacity of 7.50 MMBtu/hr.

### **Unpermitted Emission Units and Pollution Control Equipment**

The source has proposed the construction and operation of the following:

one (1) high volume low pressure (HVLP) surface coating booth, identified as Booth 2, coating metal parts with a maximum coating usage of 4.02 gallons per hour, with PM/PM10 emissions controlled by a fabric filter, with emissions exhausted through Stack S3;

### **Existing Approvals**

The existing source consists of the following permits:

- (a) Registration: 003-2189-00176 November 21, 1991
- (b) Exemption: 003-5129-00176 February 2, 1996

### **Enforcement Issue**

There are no enforcement actions pending.

### **Recommendation**

The staff recommends to the Commissioner that the registration be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete application for the purposes of this review was received on July 2, 2001.

### **Emission Calculations**

Hydra-Tech, Inc. produces aerial devices for vehicles. These aerial devices are extension arms that are added to vehicles to allow workers to service high elevation, hard to reach devices.

The source consists of

- (a) a parts fabrication and welding area consisting of one cold saw, one drill press, one electric plasma cutter torch, twenty (20) metal inert gas welding stations with a maximum combined carbon steel wire usage rate of 10.8 pounds per hour per hour, and twenty (20) oxyacetylene cutting stations,
- (b) one steel shot blasting booth,
- (c) one surface coating operation consisting of one existing HVLP spray booth and one proposed HVLP surface coating booth, with PM/PM10 emissions controlled by a fabric filter, with each booth applying the prime, finish, and touch-up coats,
- (d) one unit assembly area,
- (e) one wrap-up and inspection and testing area, and
- (f) twenty-three (23) natural gas fired space heaters and two (2) natural gas fired drying ovens.

The following calculations determine the emissions from these units.

**UNRESTRICTED POTENTIAL TO EMIT (UPTE):**

The following table summarizes the estimated unrestricted potential to emit. The calculations performed to estimate the emissions follow the table.

UPTE	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr	Comb. HAP tons/yr
Plasma Cutter	neg.	neg.	-	-	-	-	-
Drill Press and Cold Saw	neg.	neg.	-	-	-	-	-
Welding	0.26	0.26	-	-	-	-	0.02
Oxyacetylene Cutting	0.26	0.26	-	-	-	-	0.02
Shot Blasting	0.44	0.33	-	-	-	-	-
Surface Coating	1.46	1.46	-	-	20.35	-	4.51
Unit Assembly Area	neg.	neg.	-	-	-	-	-
Wrap-up, Inspection, and Testing	-	-	-	-	-	-	-
Space Heaters and Drying Ovens	0.10	0.20	neg.	3.30	0.20	2.80	neg.
<b>Total</b>	<b>2.52</b>	<b>2.51</b>	<b>neg.</b>	<b>3.30</b>	<b>20.55</b>	<b>2.80</b>	<b>4.55</b>

**(1) Parts Fabrication and Welding Area:**

**(a) Plasma Cutter:**

It is determined that the plasma cutter will generate negligible PM/PM10 emissions.

**(b) Drill Press and Cold Saw:**

It is determined that the drill press and cold saw will generate negligible PM/PM10 emissions.

**(c) Welding Emissions:**

**PM and PM10 Emissions:**

The following calculations determine the UPTE from the welding station based on MIG welding, a maximum wire usage of 10.8 lb/hr, PM and Mn emission factors of 0.0055 and 0.0005 lb PM/lb wire, respectively, emissions before controls, and 8760 hours of operation.

$$10.8 \text{ lb wire/hr} * 8760 \text{ hr/yr} * 0.0055 \text{ lb PM/lb wire} * 1/2000 \text{ ton PM/lb PM} = \mathbf{0.26 \text{ tons PM/yr}}$$

PM is determined to be equal to PM10.

**HAP Emissions:**

$$10.8 \text{ lb wire/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ lb PM/lb wire} * 1/2000 \text{ ton Mn/lb Mn} = \mathbf{0.02 \text{ tons Mn/yr}}$$

**(d) Oxyacetylene Cutting:**

The following calculations determine the oxyacetylene cutting UPTE emissions based on oxyacetylene cutting, a maximum wire usage of 10.8 lb/hr, PM and Mn emission factors of 0.0055 and 0.0005 lb PM/lb wire, respectively, emissions before controls, and 8760 hours of operation.

**PM and PM10 Emissions:**

$$10.8 \text{ lb wire/hr} * 8760 \text{ hr/yr} * 0.0055 \text{ lb PM/lb wire} * 1/2000 \text{ ton PM/lb PM} = \mathbf{0.26 \text{ tons PM/yr}}$$

**HAP Emissions:**

$$10.8 \text{ lb wire/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ lb PM/lb wire} * 1/2000 \text{ ton Mn/lb Mn} = \mathbf{0.02 \text{ tons Mn/yr}}$$

**(2) Steel Shot Blasting Booth:**

The following calculations determine the PM and PM10 emissions from the shot blast booth based on a use of steel shot, a maximum shot usage rate of 25 lb/hr, STAPPA/ALAPCO emission factors of 0.004 lb PM/lb shot and 0.003 lb PM10/lb shot, emissions before controls, and 8760 hours of operation.

$$\begin{aligned} \text{PM: } & 25 \text{ lb shot/hr} * 0.004 \text{ lb PM/lb shot} * 8760 \text{ hr/yr} * 1/2000 \text{ lb PM/ton PM} = \mathbf{0.44 \text{ tons PM/yr}} \\ \text{PM10: } & 25 \text{ lb shot/hr} * 0.003 \text{ lb PM10/lb shot} * 8760 \text{ hr/yr} * 1/2000 \text{ lb PM/ton PM} = \mathbf{0.33 \text{ tons PM10/yr}} \end{aligned}$$

**(3) Surface Coating Operation:**

The surface coating operation consists of two identical booths applying the same coatings. Each booth serves as a primer, finish, and touch-up booth. Only one coat (prime, finish, or touch-up) can be applied at each booth at a time.

The following calculations determine the UPTE from the surface coating booths based on two identical coating booths, use of the worst case coating as applied, the maximum amount of time for each coating applied, the respective maximum throughput of parts, the maximum amount of coating applied, emissions before controls, and 8760 hours of operation.

The usage rate (gallons per hour) was doubled to determine the VOC emissions from both booths combined.

**VOC Emissions:**

$$\text{lb/gal} * \text{wt \% VOC} * \text{gal/hr} * \text{hr/day} * 365 \text{ day/yr} * 1/2000 \text{ ton/lb} = \text{tons VOC/yr}$$

<b>Booths 1 and 2</b>	Density (lb/gal)	wt% VOC	gal/hr	hr/day	Tons VOC/yr
Primer Coat	9.25	35.5	2.00	12	14.38
Primer Clean-up Solvent	6.64	100.0	.04	12	0.58
Top Coat	12.04	14.6	2.00	4	2.57
Top Clean-up Solvent	6.64	100.0	.04	4	0.20
Finish Coat	12.04	14.6	4.00	2	2.57
Finish Clean-up Solvent	6.64	100.0	0.02	2	0.05
<b>Total</b>					<b>20.35</b>

#### PM/PM10:

lb/gal \* gal/hr \* (wt%VOC/100) \* (1 - transfer eff.) \* hr/day \* 365 day/yr \* 1/2000 ton/lb = ton PM/yr

<b>Booths 1 and 2</b>	Density (lb/gal)	wt% VOC	gal/hr	trans. eff.	hr/day	Tons PM/yr
Primer Coat	9.25	35.5	1.00	85	12	1.08
Primer Clean-up	6.64	100.0	.02	85	12	0.00
Top Coat	12.04	14.6	1.00	85	4	0.19
Top Clean-up	6.64	100.0	.02	85	4	0.00
Finish Coat	12.04	14.6	2.00	85	2	0.19
Finish Clean-up	6.64	100.0	0.02	85	2	0.00
<b>Total</b>						<b>1.46</b>

PM is determined to be equal to PM10 in this case.

#### HAP Emissions:

The following table summarizes the estimated unrestricted potential to emit. The calculations performed to estimate the emissions follow the table.

<b>HAP Summary</b>	Primer	Top	Finish	Tons HAP/yr
Toluene	0.18	0.06	0.03	0.27
MIK	2.87	0.63	0.62	4.12
Xylene	0.03	0.01	neg.	0.04
Methanol	0.05	0.02	0.01	0.08
<b>Combined Total</b>				<b>4.51</b>

The following calculations determine the HAP emissions based on the worst case coatings used, the wt% HAPs obtained from the MSDS sheets, the respective densities, gal/hr, and hr/day, as applied, a total of 2 booths, 8760 hours of operation, and emissions before controls.



$$\text{lb/gal} * (\text{wt} \% \text{ HAP}/100) * \text{gal/hr} * \text{hr/day} * 365 \text{ day/yr} * 1/2000 \text{ ton/lb} = \text{tons VOC/yr}$$

<b>Primer</b>	Density (lb/gal)	wt% HAP	gal/hr	hr/day	Tons VOC/yr
Coat MIK	9.25	7.0	2.00	12	2.84
Clean-up Solvent Toluene	6.64	31	0.04	12	0.18
Clean-up Solvent Xylene	6.64	5	0.04	12	0.03
Clean-up Solvent Methanol	6.64	8	0.04	12	0.05
Clean-up Solvent MIK	6.64	5	0.04	12	0.03

<b>Top</b>	Density (lb/gal)	wt% HAP	gal/hr	hr/day	Tons VOC/yr
Coat MIK	12.04	7.0	1.00	4	0.62
Clean-up Solvent Toluene	6.64	31	0.04	4	0.06
Clean-up Solvent Xylene	6.64	5	0.04	4	0.01
Clean-up Solvent Methanol	6.64	8	0.04	4	0.02
Clean-up Solvent MIK	6.64	5	0.04	4	0.01

<b>Finish</b>	Density (lb/gal)	wt% HAP	gal/hr	hr/day	Tons VOC/yr
Coat MIK	12.04	7.0	2.00	2	0.62
Clean-up Solvent Toluene	6.64	31	0.04	2	0.03
Clean-up Solvent Xylene	6.64	5	0.04	2	neg.
Clean-up Solvent Methanol	6.64	8	0.04	2	0.01
Clean-up Solvent MIK	6.64	5	0.04	2	neg.

**(4) Unit Assembly Area:**

The unit assembly area puts together the parts. It is determined that the unit assembly area will generate negligible PM/PM10 emissions.

**(5) Wrap-up, Inspection, and Testing Area:**

The wrap-up, inspection, and testing area is only a product testing process and is determined to be an ancillary process that does not generate any emissions.

**(6) Natural Gas Fired Space Heaters and Drying Ovens:**

The combustion PTE is determined based on natural gas combustion, a combined capacity of 7.50 MMBtu/hr, AP-42 emission factors (Table 1.4-1), 8,760 hours of operation, and emissions before controls.

$$\begin{aligned} \text{MMcf/yr} &= \text{MMBtu/hr} * 8760 \text{ hr/yr} * 1/1000 \text{ MMcf/MMBtu} \\ \text{ton poll./yr} &= \text{MMcf/yr} * \text{Ef (lb poll./MMcf)} * 1/2000 \text{ ton poll./lb. poll.} \end{aligned}$$

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
ton/yr	0.1	0.2	neg.	3.3	0.2	2.8

#### POTENTIAL EMISSIONS AFTER CONTROLS:

The PM/PM10 emissions from the surface coating booths are each controlled by a fabric filter with a design overall control efficiency of 95%. The PM/PM10 emissions from the shot blast operation are controlled by a cyclone with a design overall control efficiency of 85%.

The following calculations determine the potential emissions after controls based on the design control efficiencies and the estimated UPTE.

$$\text{UPTE} * (1 - \text{control efficiency}) = \text{Potential PM/PM10 Emissions After Controls}$$

The following table summarizes the potential emissions after controls.

Potential Emissions After Controls	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr	Comb. HAP tons/yr
Plasma Cutter	neg.	neg.	-	-	-	-	-
Drill Press and Cold Saw	neg.	neg.	-	-	-	-	-
Welding	0.26	0.26	-	-	-	-	0.02
Oxyacetylene Cutting	0.26	0.26	-	-	-	-	0.02
Shot Blasting	0.07	0.05	-	-	-	-	-
Surface Coating	0.07	0.07	-	-	20.35	-	4.51
Unit Assembly Area	neg.	neg.	-	-	-	-	-
Wrap-up, Inspection, and Testing	-	-	-	-	-	-	-
Space Heaters and Drying Ovens	0.10	0.20	neg.	3.30	0.20	2.80	neg.
<b>Total</b>	<b>0.76</b>	<b>0.84</b>	<b>neg.</b>	<b>3.30</b>	<b>20.55</b>	<b>2.80</b>	<b>4.55</b>

#### Potential To Emit for the Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	2.52
PM-10	2.51
SO <sub>2</sub>	neg.
VOC	20.55
CO	2.80
NO <sub>x</sub>	3.30

HAPs	Potential To Emit (tons/year)
Combined	4.65

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is greater than 10 tons per year, but less than 25 tons per year. Therefore, pursuant to 326 IAC 2-5.5-1(b)(1)(C), the source shall be registered.

### County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	attainment/unclassifiable
SO <sub>2</sub>	attainment/unclassifiable
NO <sub>2</sub>	attainment/unclassifiable
Ozone	attainment/unclassifiable
CO	attainment/unclassifiable
Lead	attainment/unclassifiable

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Allen County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

New Source PSD Definition (source emissions after controls after the proposed modification, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Potential To Emit (tons/year)
PM	0.76
PM10	0.84
SO <sub>2</sub>	neg.
VOC	20.55
CO	2.80
NO <sub>x</sub>	3.30

HAPs	Potential To Emit (tons/year)
Combined	4.55

- (a) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

- (b) This new source is not a PSD major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (c) This new source is not a Part 70 Major stationary source because The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all single HAPs is less than ten (10) tons per year, the combined HAP potential to emit (as defined in 326 IAC 2-7-1(29)) is less than twenty-five (25) tons per year, and the potential to emit of all applicable criteria pollutants are less than 100 tons per year.

### **Federal Rule Applicability**

#### **(a) New Source Performance Standards (NSPS):**

##### **40 CFR 60. Subpart MM, Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations:**

40 CFR 60. Subpart MM, Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations does not apply to the Hydra-Tech Incorporated because the source is not an automobile or light duty truck assembly plant as specified in 60.390(a).

#### **(b) National Emission Standards for Hazardous Air Pollutants (NESHAP):**

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the source.

### **State Rule Applicability - Entire Source**

#### **326 IAC 2-6 (Emission Reporting):**

This source is located in Allen County and the potential to emit of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO after controls, each, are less than the applicable level of 100 tons per year. Therefore, 326 IAC 2-6 does not apply.

#### **326 IAC 5-1 (Visible Opacity Limitations):**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)):

The processes of this source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 326 IAC 6-3-2 (Process Operations), Shot Blast Booth:

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the shot blast booth, for a process weight rate of 5025 lb/hr (2.51tons/hr), shall be 7.60 lb/hr.

$$E = 4.10 * P^{0.67} = 4.10 * (2.51)^{0.67} = 7.60 \text{ lb PM/hr}$$

The hourly PM unrestricted potential to emit is estimated to be 0.10 lb PM/hr which is less than the 326 IAC 6-3 limit of 7.60 lb PM/hr.

$$0.44 \text{ ton/yr} * 1/8760 \text{ yr/hr} * 2000 \text{ lb/ton} = 0.10 \text{ lb PM/hr.}$$

Thus, compliance is determined to be achieved.

#### 326 IAC 6-3-2 (Process Operations), Plasma Cutting, Drill Press / Cold Saw, Welding, and Oxyacetylene Cutting Processes:

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the plasma cutting, drill press / cold saw, welding, and oxyacetylene cutting processes, each with a process weight rate less than 100 lb/hr, shall be limited to 0.55 lb/hr each.

The estimated unrestricted potential to emit for each applicable process and the respective limit is listed below:

$$\text{lb PM/hr} = \text{tons PM/yr} * 2000 \text{ lb PM/ton PM} * 1/8760 \text{ yr/hr}$$

	Estimated UPTE (lb PM/hr)	326 IAC 6-3 Limit (lb PM/hr)
Plasma Cutter	neg.	0.55
Drill Press/Cold Saw	neg.	0.55
Welding	0.06	0.55
Oxyacetylene Cutting	0.06	0.55

The hourly PM unrestricted potential to emit for the applicable units are less than their respective 326 IAC 6-3-2 hourly limits. Thus, compliance is determined to be achieved.

#### 326 IAC 6-3-2 (Process Operations) for Coating Booths 1 and 2:

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the coating booths 1 and 2, each, shall be determined utilizing the following equation.

$$E = 4.10 * P^{0.67}$$

where: P = Process Weight Rate, tons/hr  
E = Emission Rate, lb PM/hr

**326 IAC 8-2-2 Surface Coating Emission Limitations: Automobile and Light Duty Truck Coating Operations:**

326 IAC 8-2-2 does not apply because Hydra-Tech is not an automobile or light duty truck assembly plant as specified in 326 IAC 8-2-2(b).

**326 IAC 8-2-9 Surface Coating Emission Limitations: Miscellaneous Metal Coating Operations:**

Surface Coating Booths 1 and 2 are subject to 326 IAC 8-2-9 because the first two digits of the SIC code for the source is "39", one of the applicable SIC code major groups.

Pursuant to 326 IAC 8-2-9, the VOC content of each coating applied in Coating Booths 1 and 2 shall be less than or equal to 3.5 pounds per gallon of coating, excluding water.

In addition, all solvents sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

The estimated VOC contents of the coatings are listed below

	Estimated VOC Content lb VOC/gal less water	Limit lb VOC/gal less water
Primer	3.28	3.5
Top	1.86	3.5
Finish	1.86	3.5

The estimated VOC contents are less than the 326 IAC 8-2-9 content limit. Thus, overall compliance is determined to be achieved. To demonstrate compliance on a more continuous basis, the owner or operator shall keep records of the type and brand of coatings applied, the date it is applied, and the VOC content in lb/gal, excluding water, as delivered to the applicator. These records shall be kept for a minimum period of 5 years, and made available to the Office of Air Quality upon request.

**Testing Requirements**

No stack testing is required for any units of this source because:

- (a) there are no applicable NSPS or NESHAPs,
- (b) 326 IAC 6-1 does not apply,
- (c) there are no emission units with potential to emit (PTE) greater than 40 tons per year that are using the control device to achieve compliance with any limitations,
- (d) there are no baghouses being used to satisfy a synthetic minor limit,
- (e) there are no unapproved alternate emission factors being used, and
- (f) there are no emission units that are non-compliant.

The above determination is based on Office of Air Quality (OAQ) guidance for new source construction, January 1, 1999.

### **Conclusion**

The operation of this aerial device manufacturing operation shall be subject to the conditions of the attached proposed (Registration No.: 003-14276-00176).